



THE ATMOSPHERIC RESERVOIR

Examining the Atmosphere and Atmospheric Resource Management

National Academy of Science examines weather modification technology

By Bruce Boe

Fifteen North American scientists gathered in Washington, D.C., last month, at the invitation of the National Academy of Sciences' Board on Atmospheric Science and Climate (BASC). The purpose of the gathering: to report on the status of present weather modification technologies, identify scientific uncertainties, and enumerate the avenues through which the uncertainties might be resolved.

The report of the invited committee will serve as the basis for an in-depth, formal assessment by the Academy, toward the formulation of a national plan for the effective development and implementation of the technology.

The scientists were: Bruce Boe, former Director, North Dakota Atmospheric Resource Board; Dr. Roelof Bruintjes, Research Scientist, National Center for Atmospheric Research; Dr. William Cotton, Atmospheric Sciences Professor, Colorado State University; Dr. Paul DeMott, Research Scientist, Colorado State University; Dr. K. Ruben Gabriel, Statistics Professor, University of Rochester; Don Griffith, President, North American Weather Consultants; Dr. Roland List, Physics Professor, University of Toronto; Dr. Harold Orville, Atmospheric Sciences Professor Emeritus, South Dakota School of Mines and Technology; Dr. Roger Reinking, Research Scientist, NOAA Environmental Technologies Laboratory;

James Renick, Director, Alberta Hail Suppression Program; Dr. Bernard Silverman, former Director of the Division of Atmospheric Water Resources Management, U.S. Bureau of Reclamation; Dr. Paul Smith, former Director, Institute of Atmospheric Sciences, South Dakota School of Mines and Technology; Dr. Paul Try, Director, Global Energy and Water Experiment; Dr. Joseph Warburton, former Director, Desert Research Institute, University of Nevada, Reno; and Dr. William



Woodley, President, Woodley Weather Consultants. Providing charge and guidance to the committee was Dr. Elbert "Joe" Friday, Director, BASC.

After opening comments by Dr. Friday and NOAA Administrator Dr. James Baker, the first day of the workshop was devoted to presentations by the attendees, each in their specific areas of expertise. These presentations reviewed the status of rainfall augmentation technology, snowpack augmentation, advances in instrumentation, hail suppression,

various seeding agents, program evaluation, and computer modeling, with liberal discussion throughout.

Comments and suggestions were provided by Dr. Roddy Rogers of the National Science Foundation, Dr. John Garner of NOAA's Office of Oceanic and Atmospheric Research, and John Justice of the Congressional Research Service.

The second day was dedicated to writing a draft summary report, with sections on each of the subjects presented the day before, each including a summary of current scientific capabilities, emphasizing changes since 1978, uncertainties, and future scientific actions needed to resolve the uncertainties.

The next step, according to Dr. Friday, will likely be a considerably more lengthy study by NAS, which could culminate in a recommendation to Congress for a renewed national effort in the field.

The committee's report should become available on the BASC website sometime early next month (January 2001) at <http://www4.nationalacademies.org/cger/basc.nsf>. ■

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